Claims

1. A method for sending accounting data from a call server to an Authentication, Authorization, and Accounting (AAA) server, the method comprising the steps of: during an IP session, following an occurrence of an accounting event in the call server, determining if the call server comprises accounting data pending transmission to the AAA server, the accounting data comprising at least an activity parameter indicative of an activity during a past first portion of the IP session that is to be charged according to a first billing rate; and

if the call server comprises accounting data pending transmission to the AAA server:

sending from the call server to the AAA server an Accounting Stop message comprising the accounting data; and

sending from the call server to the AAA server an Accounting Start message indicative of a start of a second portion of the IP session that is to be charged according to a second billing rate.

[c2]   *2.* The method claimed in claim 1, further comprising prior to the step of determining, the step of:

following a change of a billing rate applicable to the IP session, from the first billing rate to the second billing rate, collecting the accounting data from the call server.

[c3]   *3.* The method claimed in claim 2, further comprising the step of:

storing the accounting data in a memory of the call server.

[c4]   *4.* The method claimed in claim 2, wherein the change of the billing rate is triggered by an expiration of a TimeOfDay Timer of the call server.

[c5]   *5.* The method claimed in claim 1, wherein the accounting event is an accounting stop event indicative of a termination of the IP session, and wherein the method further comprises the step of:

sending from the call server to the AAA server a second Accounting Stop message indicative of a termination of the second portion of the IP session that is to be charged according to the second billing rate, the second Accounting Stop comprising at least an activity parameter indicative of an activity during the second

portion of the IP session that is to be charged according to a second billing rate.

[c6]   6. The method claimed in claim 1, wherein the accounting event is a first accounting interim event.

[c7]   7. The method claimed in claim 6, wherein the method further comprises the step of:
following an occurrence of a next account interim event in the call server during the IP session, sending from the call server to the AAA server a second Account Interim message comprising at least an activity parameter indicative of an activity during the second portion of the IP session that is to be charged according to the second billing rate.

[c8]   8. A telecommunications system comprising:
an Authentication, Authorization, and Accounting (AAA) server performing at least a function of accounting for users of the system;
a call server handling an IP session and being connected to the AAA server, wherein following an occurrence of an accounting event in the call server, the call server determines if any accounting data is pending transmission to the AAA server, the accounting data comprising at least an activity parameter indicative of an activity during a past first portion of the IP session that is to be charged according to a first billing rate, and wherein if the call server has accounting data pending transmission to the AAA server, i) the call server sends to the AAA server an Accounting Stop message comprising the accounting data; and ii) the call server sends to the AAA server an Accounting Start message indicative of a start of a second portion of the IP session that is to be charged according to a second billing rate.

[c9]   9. The telecommunications system claimed in claim 8, wherein before determining if any accounting data is pending transmission to the AAA server, the call server collects the accounting data following a change of a billing rate applicable to the IP session, from the first billing rate to the second billing rate.

[c10]   10. The telecommunications system claimed in claim 9, wherein the call server stores the accounting data in a memory.

[c11]   *11.* The telecommunications system claimed in claim 9, wherein the call server comprises a TimeOfDay timer which expiration triggers the change of the billing rate, from the first billing rate to the second billing rate.

[c12]   *12.* The telecommunications system claimed in claim 8, wherein the accounting event is an accounting stop event indicative of a termination of the IP session, and wherein the call server sends to the AAA server a second Accounting Stop message indicative of a stop of the second portion of the IP session that is to be charged according to the second billing rate, the second Accounting Stop message comprising at least an activity parameter indicative of an activity during the second portion of the IP session that is to be charged according to the second billing rate.

[c13]   *13.* The telecommunications system claimed in claim 8, wherein the accounting event is a first accounting interim event.

[c14]   *14.* The telecommunications system claimed in claim 13, wherein following an occurrence of a next account interim event in the call server during the IP session, the call server sends from the call server to the AAA server a second Account Interim message comprising at least an activity parameter indicative of an activity during the second portion of the IP session that is to be charged according to the second billing rate.

[c15]   *15.* A call server, comprising:
means for supporting a provision of an IP session;
a TimeOfDay timer for indicating a change of the billing rate applicable in a telecommunications system managed by the call server, from a first billing rate to a second billing rate; and
a memory for storing accounting data comprising at least an activity parameter indicative of an activity during a past first portion of the IP session that is to be charged according to the first billing rate, the accounting data being stored in the memory following an expiration of the TimeOfDay timer,
wherein, upon occurrence of an accounting event in the call server, the call server determines if accounting data is pending transmission to an Authentication, Authorization, and Accounting (AAA) server, and if so, the call server sends to the AAA server a first Accounting Stop message comprising the accounting data, and

the call server further sends to the AAA server an Accounting Start message indicative of a start of a second portion of the IP session that is to be charged according to the second billing rate.

[c16] *16.* The call server claimed in claim 15, wherein before determining if any accounting data is pending transmission to the AAA server, the call server stores the accounting data in the memory following a change of a billing rate applicable to the IP session, from the first billing rate to the second billing rate.

[c17] *17.* The call server claimed in claim 15, wherein the accounting event is an accounting stop event indicative of a termination of the IP session, and wherein following the transmission of the Accounting Start message, the call server further sends to the AAA server a second Accounting Stop message indicative of the termination of the second portion of the IP session that is to be charged according to the second billing rate, the second Accounting Stop comprising at least an activity parameter indicative of an activity during the second portion of the IP session.

[c18] *18.* The call server claimed in claim 15, wherein the accounting event is a first accounting interim event.

[c19] *19.* The call server claimed in claim 18, wherein following an occurrence of a next account interim event in the call server during the IP session, the call server sends from the call server to the AAA server a second account interim message comprising at least an activity parameter indicative of an activity during the second portion of the IP session that is to be charged according to the second billing rate.